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Comparison of Observed Times with Greenwich Times.

		Observed.	Greenwich.	Diff.
1	III. Shadow E.	14 14 12	14 15 0	—
2	II. Tr. Ingress	28 10	33 0	5
3	II. Shadow E.	15 36 0	14 50 0	46
4	IV. Transit E.	51 0	16 15 0	24
5	III. Transit I.	59 25	15 56 0	3
6	I. R. Oc.	16 15 50	16 15 0	—

In the case of No. 3—*i.e.* the egress of the shadow of II.—I cannot at all account for the difference of 46 minutes.

Shanhill, Co. Dublin:
1883, *Oct.* 24.

Jupiter without visible Satellites. By the Rev. S. J. Johnson.

The disappearance of *Jupiter's* satellites on the morning of October 15 afforded an interesting instance of the tabular errors of the fourth satellite. Instead of lasting nineteen minutes, as according to the *Nautical Almanac*, it only lasted half a minute, and possibly, with a large instrument, the satellites may never have entirely gone out of sight.

On turning the telescope on *Jupiter* at $3^h 45^m$ A.M. I never noticed the belts sharper defined. One satellite, the third, alone remained visible just at the edge of the planet. At $3^h 55^m 50^s$ it appeared to have vanished. Thirty seconds afterwards the fourth began to come into view at the opposite side of the planet; so that as viewed with a telescope of the size I was employing ($3\frac{1}{4}$-in. Equatorial, power 180), the planet for half a minute appeared denuded of his satellites; at $4^h 13^m 40^s$ A.M. the first reappeared.

Melplash Vicarage,
Bridport: Oct. 27.

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Elliptic Elements of Comet 1882, *I.* By F. J. Parsons.

(*Communicated by Prof. Safford.*)

The accompanying set of elements was derived from the following six normal places :—

G.M.T.	Mean R.A. 1882·0.	Prob. Error.	No. of Obs.	Mean δ 1882·0.	Prob. Error.	No. of Obs.	Time of Normal Places.
Mar. 26·5	271 36 46·9	±0·71	63	37 15 15·6	±0·41	61	Mar. 19–Apr.
Apr. 12·5	281 22 16·7	±0·20	70	49 49 15·1	±0·66	70	Apr. 4–Apr. 21
May 25·5	55 55 34·2	±0·45	40	59 36 4·1	±0·28	40	May 21–May 28
June 2·5	66 45 42·3	±0·56	18	44 36 27·1	±0·53	17	June 1–June 5
July 9·5	156 59 16·35	±0·59	27	9 45 17·5	±1·3	27	July 8–July 17
Aug. 7·5	181 46 55·5	±1·17	12	4 14 3·7	±1·3	12	Aug. 1–Aug. 16

From the 2nd, 3rd, and 5th of these normal places a preliminary set of elements was computed according to the methods given in Gauss's *Theoria Motus* as follows :

$$T = \text{June } 10{\cdot}52908$$
$$\log.\ q = 8{\cdot}7836381$$
$$\log.\ e = 9{\cdot}9999998$$

$$\left.\begin{aligned} \Omega &= 204^\circ\ 56'\ 18''{\cdot}61 \\ \omega &= 208\ \ 59\ \ 38\ 17 \\ i &= \ 73\ \ 48\ \ 34{\cdot}88 \end{aligned}\right\} \text{Mean Eq. } 1882{\cdot}0$$

Rectangular Equatorial Coordinates.

$$x = r[9\ 9611128] \sin(126^\circ\ 22'\ 53''{\cdot}24 + v)$$
$$y = r[9{\cdot}8608368] \sin(\ 61\ \ 11\ \ 47{\cdot}56 + v)$$
$$z = r[9{\cdot}9021136] \sin(196\ \ 51\ \ 24{\cdot}51 + v)$$

With these elements, considering the excentricity equal to unity, comparison was made with all six normal places in order to make the final corrections to the preliminary orbit by means of a least-square solution.

A computation in duplicate by two independent methods gave the following twelve equations of condition given in logarithmic form.

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